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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,319	06/21/2005	Saburo Matsuoka	2005_0628A	1352
513	7590	08/23/2007	EXAMINER	
WENDEROTH, LIND & PONACK, L.L.P.			YEE, DEBORAH	
2033 K STREET N. W.			ART UNIT	PAPER NUMBER
SUITE 800			1742	
WASHINGTON, DC 20006-1021			MAIL DATE	DELIVERY MODE
			08/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/531,319	MATSUOKA ET AL.
	Examiner	Art Unit
	Deborah Yee	1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-9 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-9 is/are rejected.
- 7) Claim(s) \_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 13 April 2005 is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 4-13-05.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 to 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the English abstract of Korean patent 2002-008854.

3. The English abstract discloses a steel alloy having a nitride layer, wherein the steel has a ferrite grain structure having an average grain size of less than 20  $\mu\text{m}$  (overlaps claimed range of 3  $\mu\text{m}$ ) and the nitride layer is formed on a surface of the steel. Moreover prior art steel has a composition containing C, Mn, P, and at least one of Mn, Cr, Mo, Ti, Nb, V and P in wt% ranges that overlap those recited by the one or more of the recited dependent claims. Note that the overlap in range limitations establishes a *prima facie* case of obviousness since it would be obvious for one skilled in the art to select the claimed range limitations over the broader disclosure of the prior art because the prior art teaches similar properties of high strength and high toughness, see MPEP 2144.06.

Art Unit: 1742

4. Claims 1 to 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 10-306343.

5. The English abstract discloses a steel alloy having a nitride layer, wherein the steel has a ferrite grain structure having an average grain size of less than 40  $\mu\text{m}$  (overlaps claimed range of 3  $\mu\text{m}$ ) and the nitride layer is formed on a surface of the steel. Moreover prior art steel has a composition containing C, Mn, P, and at least one of Mn, Cr, Mo, Ti, Nb, V and P in wt% ranges that overlap those recited by the one or more of the recited dependent claims. Note that the overlap in range limitations establishes a *prima facie* case of obviousness since it would be obvious for one skilled in the art to select the claimed range limitations over the broader disclosure of the prior art because the prior art teaches similar properties of high strength, hardenability and high toughness, see MPEP 2144.06.

6. Claims 1 to 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 9-291339.

7. The English abstract discloses a steel alloy having a nitride layer, wherein the steel has a ferrite grain structure having an ultra-fine grain size number of No. 5 or above (overlaps claimed range of 3  $\mu\text{m}$ ) and the nitride layer is formed on a surface of the steel. Moreover prior art steel has a composition containing C, Mn, P, and at least one of Mn, Cr, Mo, Ti, Nb, V and P in wt% ranges that overlap those recited by the one or more of the recited dependent claims. Note that the overlap in range limitations establishes a *prima facie* case of obviousness since it would be obvious for one skilled in the art to select the claimed range limitations over the broader disclosure of the prior

art because the prior art teaches similar properties of high fatigue strength and high toughness, see MPEP 2144.06.

***Specification***

8. The disclosure is objected to because of the following informalities: Page 7, second to last line, "dine", should be –fine---.

Appropriate correction is required.

***Information Disclosure Statement***

9. The information disclosure statement filed 4-13-05 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-27211253. The examiner can normally be reached on monday-friday 6:00am-2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Deborah Yee  
Primary Examiner  
Art Unit 1742

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